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Hawaii Natural Energy Institute  
Holmes Hall 246 • 2540 Dole Street • Honolulu, Hawaii 96822

December 17, 1991

DIV. OF WATER &  
LAND DEVELOPMENT

Mr. Norman Hayashi  
Director  
Planning Department  
County of Hawaii  
25 Aupuni Street  
Hilo, Hawaii 96720

Dear Mr. Hayashi:

As required in the County of Hawaii Planning Commission's geothermal resources permit (GRP 89-1), five (5) copies of the November, 1991 monthly report are enclosed.

If you have any questions, please call me at 522-5620.

Sincerely,

Harry Olson  
Principal Investigator

Enclosure: November monthly report

**NOVEMBER 1991 MONTHLY REPORT**

Scientific Observation Hole (SOH) Program

Geothermal Resource Permit: GRP 89-1

Lilewa, Kapoho, and Halekamahina, Hawaii

TMK: 1-2-10:01; 1-4-01:02; and 1-4-02:32

Hawaii Natural Energy Institute

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December 1991

## SUMMARY

All drilling operations for the Scientific Observation Hole project have ended. The Tonto Drilling Services U-5000 drilling rig has been demobilized and shipped back to the mainland. All other rentals for the drilling operations have been returned. Plans have been made for downhole monitoring equipment to be installed in SOH-1 and SOH-2 in early January, 1992.

## I. INTRODUCTION

This document presents the November, 1991, monthly report to the County of Hawaii Planning Department to support the Scientific Observation Hole (SOH) program in the Kilauea Middle and Lower East Rift Zones. The SOHs are for scientific observation purposes only. The information to be gained from the SOHs will provide an assessment of subsurface geological conditions, groundwater level and composition, temperature, drilling conditions, an inventory of possible mineral and geothermal resources, and an eruptive history of the island to the depth drilled.

This report addresses: occurrence and duration of any start-up, shut-down, and operation mode of any SOH/facility; performance testing, evaluation, calibration checks, and adjustment and maintenance of the continuous emission monitor(s) that have been installed; and emission measurements.

## II. BACKGROUND

The County of Hawaii Planning Commission approved, on August 8, 1989, a geothermal resource permit application (GRP 89-1) to drill Scientific Observation Holes (SOHs) in the Kilauea Middle and Lower East Rift Zone. This document presents a monthly report, as required in Condition 6:

"The petitioner shall maintain a record in a permanent form suitable for inspection and five (5) copies shall be filed with the Planning Department on a monthly basis during drilling and for six (6) months after the completion of drilling to establish a hole specific baseline and such record shall be available to the community. The record shall include:

- a. Occurrence and duration of any start-up, shut-down, and operation mode of any SOH/facility.
- b. Performance testing, evaluation, calibration checks, and adjustment and maintenance of the continuous emission monitor(s) that have been installed.
- c. Emission measurements reported in units compatible with applicable standards/guidelines."

As designated, four holes were planned to be drilled along the Kilauea East Rift Zone on the Big Island of Hawaii. Three of the Big Island holes (SOHs 1, 2, and 4) are on agriculture land and have been permitted by the County of Hawaii Planning Commission. The fourth hole, designated SOH-3, is on

conservation land. SOH activities under Conservation District Use Permit (HA 12/20/85 - 1830) issued to the Estate of James Campbell have been approved. SOH-3 will not be drilled during this phase of activities.

### III. SOH-1 SITE

#### Drilling Activity

Drilling is complete. The site will be reclaimed to its original state after testing and monitoring are completed. The mud pit is scheduled to be filled with cinders and leveled in December.

#### Monitoring Program -

Air Quality, Meteorological, Noise and Emissions are not monitored, as drilling has been completed at this site. Monitoring will continue for temperature and pressure on a periodic basis.

### IV. SOH-2 SITE

#### Drilling Activity

Drilling is complete. The site will be reclaimed to its original state after testing and monitoring are completed. The mud pit is scheduled to be filled with cinders and leveled in December.



#### Monitoring Program -

Air Quality, Meteorological, Noise and Emissions are not monitored, as drilling has been completed at this site. Monitoring will continue for temperature and pressure on a periodic basis.

#### V. SOH-3 SITE

##### Drilling Activity

SOH-3 was scheduled to be located at the True/Mid-Pacific alternate drill site 2 (approximately 3,000 feet north-north-west of the present drill site). On June 10, 1991, a 90 day grading permit was issued by the Planning Department for the proposed SOH-3 site. As the Tonto drill rig has been released, no access, site or drilling work will be done at the SOH-3 site during the phase of the SOH program just ended.

#### VI. SOH-4 SITE

##### Drilling Activity

Drilling is completed. No activity was performed during this period.

#### Monitoring Program -

Air Quality, Meteorological, Noise and Emissions are not monitored, as drilling has been completed at this site. Monitoring will continue for temperature and pressure on a periodic basis.